

Watershed Approach to Stream Stability and Benefits Related to the Reduction of Nutrients

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Abstract

A number of streams in the hill area of north central Mississippi have been experiencing varying degrees of instability for the last several decades. This instability, bed degradation and bank failure, has resulted in numerous problems including damage to local infrastructure, the loss of productive agricultural land, deposition in flood control channels, and environmental degradation. The Mississippi Delta Headwaters Project (formerly the Demonstration Erosion Control Project) administered by the Vicksburg District of the Corps of Engineers has been successful in stabilizing some of these streams. The Mississippi Delta Headwaters Project (MDHP) restores stream stability at a reasonable cost by addressing problems in the entire drainage basin, i.e. the systems approach.

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The paper will discuss techniques employed in the analysis of the basin, methods of restoring stability and the resulting benefits including environmental enhancement, bed and bank stability, erosion control and the reduction of sedimentation.